
Name of Organization: Wisconsin Department of Natural Resources

Type of Organization: State

Contact Information: Ms. Margaret Brunette

Remediation and Redevelopment

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Project Title: Menomonee River Valley Physical Hydrology

Project Category: Contaminated Sediments

Rank by Organization (if applicable): 7

Total Funding Requested (\$): 75,000 **Project Duration:** 1 Years

Abstract:

Understanding the basic hydrology of the Menomonee Valley is essential to determining risks posed by groundwater contamination. While the shallow groundwater system of the Valley is formed on Devonian limestone that does not provide a source of drinking water, this groundwater system does interact with the Menomonee River which leads to Lake Michigan. The shallow groundwater system in the Menomonee Valley is extremely complex due to its hydraulic connection with surface water and interplay of natural flows including the Menomonee River, Lake Michigan, and several man-made canals. Reversals in the direction of groundwater flow, depending on prevailing conditions, are thought to be common.

This project will develop a calibrated model of the hydrologic system (sources and sinks of water, general directions of flow) with assistance of the City of Milwaukee, USGS, the DNR and EPA. The monitoring plan includes a total of 146 monitoring points comprised of 116 shallow groundwater monitoring wells, 12 piezometers, 12 one-inch diameter temporary wells (installed within sewer line backfill) and 6 river and canal level gauges. A final calibrated model will demonstrate an understanding of the shallow groundwater flow system. It will shed light on the the rates of flow between surface water features (rivers, canals, and Lake Michigan) and the groundwater as well as estimate rates of groundwater movement under different hydrologic conditions. This information, in turn, can be used to understand risks posed by contaminant migration through and out of the Valley via groundwater, including risks to Lake Michigan.

Geographic Areas Affected by the Project

States:

<input type="checkbox"/> Illinois	<input type="checkbox"/> New York
<input type="checkbox"/> Indiana	<input type="checkbox"/> Pennsylvania
<input type="checkbox"/> Michigan	<input checked="" type="checkbox"/> Wisconsin
<input type="checkbox"/> Minnesota	<input type="checkbox"/> Ohio

Lakes:

<input type="checkbox"/> Superior	<input type="checkbox"/> Erie
<input type="checkbox"/> Huron	<input type="checkbox"/> Ontario
<input checked="" type="checkbox"/> Michigan	<input type="checkbox"/> All Lakes

Geographic Initiatives:

<input type="checkbox"/> Greater Chicago	<input type="checkbox"/> NE Ohio	<input type="checkbox"/> NW Indiana	<input type="checkbox"/> SE Michigan	<input type="checkbox"/> Lake St. Clair
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Primary Affected Area of Concern: Milwaukee Estuary, WI

Other Affected Areas of Concern: Lake Michigan/Menomonee River

For Habitat Projects Only:

Primary Affected Biodiversity Investment Area:

Other Affected Biodiversity Investment Areas:

Problem Statement:

In 1998, U.S. EPA provided a \$200,000 Brownfields Assessment Pilot grant to the City of Milwaukee to support the development of an area-wide approach to management of groundwater contamination in the Menomonee Valley. Clarification of property owner liability for groundwater issues is a critical first step in the redevelopment of the more than 350 acres of vacant or underutilized land in the Menomonee Valley. This project needs to establish both the level of environmental contamination in the groundwater as well as the fate and transport of these contaminants in order for the WDNR to negotiate an area-wide agreement for the management of groundwater as permitted by the 1999-2001 Wisconsin State Budget.

Proposed Work Outcome:

A final calibrated model will demonstrate an understanding of the shallow groundwater flow system. This information, in turn, can be used to understand risks posed by contaminant migration through and out of the Valley via groundwater, including risks to Lake Michigan. It is hoped that this project would establish both the level of environmental contamination in the groundwater as well as the fate and transport of these contaminants in order for the WDNR to negotiate an area-wide agreement for the management of groundwater as permitted by the 1999 - 2001 Wisconsin State Budget.

Project Milestones:

Dates:

Project Start/Initial water levels

11/1999

USGS modeling starts

12/1999

Additional monitoring starts

03/2000

Chemical sampling plan/QAP

05/2000

Access agreements

06/2000

Chemical Characterization starts

11/2000

Assess tools for area-wide GW starts

06/2000

Project End

06/2002



Project Addresses Environmental Justice

If So, Description of How:

This project is being supported by the 16th St. Community Health Center. The Health Center is very pro-active in the economic growth and environmental enhancement of the Menomonee Valley area for the well being of the families they serve including a large minority population.



Project Addresses Education/Outreach

If So, Description of How:

Project Budget:

	Federal Share Requested (\$)	Applicant's Share (\$)
Personnel:	0	0
Fringe:	0	0
Travel:	0	0
Equipment:	0	0
Supplies:	0	0
Contracts:	75,000	0
Construction:	0	0
Other:	0	0
Total Direct Costs:	75,000	0
Indirect Costs:	0	0
Total:	75,000	0
Projected Income:	0	0

Funding by Other Organizations (Names, Amounts, Description of Commitments):

\$200,000 - Current EPA brownfields grant
\$170,000 - additional funds requested from EPA (not approved yet)
\$55,000 - from EPA to support USGS modeling

Funds committed for other projects in the Menomonee Valley:

\$155,000 - WI COMM brownfields grant funding for Sigma Headquarters
\$123,000 - MEDC funding to test 9 Redevelopment Authority parcels
\$20,000 - from Milwaukee County for Garden Fresh Foods
\$1,000,000 - from WDNR for testing and cleanup
\$900,000 - from WI COMM for redevelopment

Description of Collaboration/Community Based Support:

Partners for the project include:

Menomonee Valley Partners, Inc.
Friends of Menomonee River
Keep Greater Milwaukee Beautiful
Sixteenth Street Community Health Center
The Dickman Co., Inc.
Menomonee Valley Business Association
USGS
Wisconsin Dept. of Commerce
Citizens for a Better Environment
HNTB
WDNR
30th Street Industrial Corridor, Inc.
Mandel Group
Northwestern Mutual Life
Michael Best and Friedrich
Opus North Corp.